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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/729,556	12/04/2003	James M. Harris	SP02-139	2053
22928	7590	05/03/2007		
CORNING INCORPORATED			EXAMINER	
SP-TI-3-1			PASCAL, LESLIE C	
CORNING, NY 14831				
			ART UNIT	PAPER NUMBER
			2613	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/729,556

Applicant(s)

HARRIS ET AL.

Examiner

Leslie Pascal

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 March 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 13-23 is/are pending in the application.
- 4a) Of the above claim(s) 14-16 and 23 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 13 17-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

1. Claim 14 is withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 3-14-07. Further, the applicant has added new claims. Claim 23 is withdrawn from consideration because it is drawn to the invention of claim 14 which was previously restricted. Presently, this situation is disclosed in MPEP 806.05(c), section II, section B. Claim 1 is AB_{br} . Claim 2 is B_{sp} . Claim 23 is AB_{sp} . A is related to the multiplexing and subsystem. B_{br} is related to the transmitter and receiver of claim 13 without details of clocking and bit phase details. B_{sp} is related to the transmitter and receiver of claims 14 and 23 with details of clocking and bit phase details. Since applicant elected claim 13, claims 17-22 are going to be examined with these claims. Claims 14 and 23 are withdrawn from consideration at this time.

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 13 and 17-22 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. It is not clear what is meant by "orthogonal multiplexing" from the specification and claims. It is further unclear how the different dimensions are used. For example,

there does not appear to be any detail of how the wavebands are used or how this provides orthogonal multiplexing. Specifically, time and polarization in combination with the wavelength or waveband are not clearly disclosed. Nor is it clear how this is considered "orthogonal". The specification does not teach how four dimensions provide the orthogonal multiplexing. It appears that the applicant feels that this is so well known that he does not have to disclose it. In addition, the specification does not teach how the switching is done "in less than 100 picoseconds".

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 17-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. See MPEP § 2173.05(c). Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131

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USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claim 13 recites the broad recitation less than 1 microsecond, and claim 17 also recites less than a nanosecond and claim 18 recites less than a 100 picoseconds, which is the narrower statement of the range/limitation.

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 13, 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suemura et al (6333800) in view of Hill et al (5241409).

In figure 29, Suemura et al teach a plurality of transmitters (1000-1031), multiplexing subsystem (1100-1103), distribution subsystem (1200-1203) and one or more selection subsystems (1300-1307, 1400-1431). Although he does not teach specifics about his receivers operating in "burst mode", it is well known to use burst mode in data communications in order to send a sequence of signals as a unit, which can be separated as a burst also. In regard to the orthogonal multiplexing, the applicant defines this as having at least two separate parameters (space and wavelength). Figure 29 shows the space (four different lines between elements 1100 –1103 and 1200-1203 respectively) and teaches the wavelength multiplexing, Suemura et al teach a system similar to applicant's figure 21. In regard to the speed of the selection

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subsystem, Suemura teaches using a tunable filter to select the channel. Hill et al teach that it is well known for a tunable filter to be fast (column 2, lines 26-29). It would have been obvious to use fast filters in the system of Suemura et al in order to quickly separate the signals as taught by Hill et al without waiting for slow filters to tune to the correct channel. In that it would have been obvious to switch fast, it would have been obvious to select as fast as possible. See the above 112 first and second paragraph rejections. In regard to claims 20-22, see the above 112, first paragraph rejection. If the applicant feels that such multiplexing is so well known that he does not have to disclose how it is done, it would appear that it would have been obvious in the system of Suemura et al.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leslie Pascal whose telephone number is 571-272-3032. The examiner can normally be reached on Monday- Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on 571-272-3022. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Leslie Pascal
Primary Examiner
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